freedom of switch placement and increased aesthetics along with needed user haptic feedback. Further, embodiments of the present invention allow context to be included in the button press because the button does not always have to feel the same due to different available haptic effects. For example, if the button functionality was not permitted at the time of an attempted press, an error buzz effect could be played instead of a standard haptic effect. Further, the isolation of the haptic effect reduces power requirements by localizing the action to a small region, and reduces potential acoustic noise generation.

[0027] Although in embodiments disclosed above the reduced thickness region is created by removal of material from the rear side of the surface, other methods can be used to create a reduced thickness region. For example, instead of removal of material, material can be added to the surface in regions other than the reduced thickness region. In another embodiment, surface **12** can be formed from non-uniform materials. For example, a softer plastic region can be molded into a harder plastic base.

[0028] Several embodiments of the present invention are specifically illustrated and/or described herein. However, it will be appreciated that modifications and variations of the present invention are covered by the above teachings and within the purview of the appended claims without departing from the spirit and intended scope of the invention.

What is claimed is:

1. A surface that generates a haptic feedback, said surface comprising:

a first region having a first level of stiffness; and

a second region having a second level of stiffness;

wherein said second region defines a deformation region and wherein the haptic feedback is generally localized within said deformation region.

2. The surface of claim **1**, wherein said second level of stiffness is less than said first level of stiffness.

3. The surface of claim **2**, wherein said deformation region is substantially the same region as said second region.

4. The surface of claim **2**, wherein said deformation region is generally surrounded by said second region.

5. The surface of claim **2**, wherein said first region has a first thickness and said second region has a second thickness that is thinner than said first thickness.

6. The surface of claim **1**, wherein said deformation region contacts an actuator during the haptic feedback.

7. The surface of claim **1**, wherein the haptic feedback comprises a vibration of the deformation region.

8. The surface of claim **5**, wherein said second thickness is tapered.

9. A system for providing feedback to a user input, said system comprising:

a surface comprising a first region having a first level of stiffness;

a second region having a second level of stiffness; and

an actuator coupled to said surface;

wherein said second region defines a deformation region.

10. The system of claim **9**, wherein said actuator is adapted to generate a haptic effect generally localized within said deformation region.

11. The system of claim **9**, wherein said actuator comprises a plunger coupled to an electromagnet.

12. The system of claim **11**, wherein said plunger is coupled to said deformation region.

13. The system of claim **9**, wherein said actuator comprises a smart material.

14. The system of claim **9**, wherein said second level of stiffness is less than said first level of stiffness.

15. The system of claim **9**, wherein said deformation region is substantially the same region as said second region.

16. The system of claim **9**, wherein said deformation region is generally surrounded by said second region.

17. The system of claim **9**, wherein said first region has a first thickness and said second region has a second thickness that is thinner than said first thickness.

18. The system of claim **10**, wherein the haptic effect comprises a vibration of the deformation region.

19. The system of claim **17**, wherein said second thickness is tapered.

20. A method of providing feedback for a haptic enabled location on a contiguous surface having a front side and a rear side, said method comprising:

defining a deformation region on the surface via an intersection of a first region having a first level of stiffness and a second region having a second level of stiffness;

receiving an indication that the haptic enabled location is pressed; and

generating a haptic effect on the deformation region when the haptic enabled location is pressed.

21. The method of claim **20**, wherein said generating comprises contacting the deformation region with an actuator on the rear side.

22. The method of claim **20**, further comprising generating illumination at the haptic enabled location when the haptic enabled location is pressed.

23. The method of claim **20**, wherein the haptic effect indicates that a haptic enabled location press event has been recognized.

24. The method of claim **20**, wherein the haptic effect indicates that the haptic enabled location was pressed in error.

25. The method of claim **20**, further comprising providing an indicator of the haptic enabled location that is visible on the front side, wherein said deformation region is adjacent to the indicator.

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